

Fishery Fact Sheet

CECAF Fisheries Reports 2011

Spain Freezer bottom trawl shrimp fishery - Senegalese waters, 2011

Crevettiers congélateurs espagnols

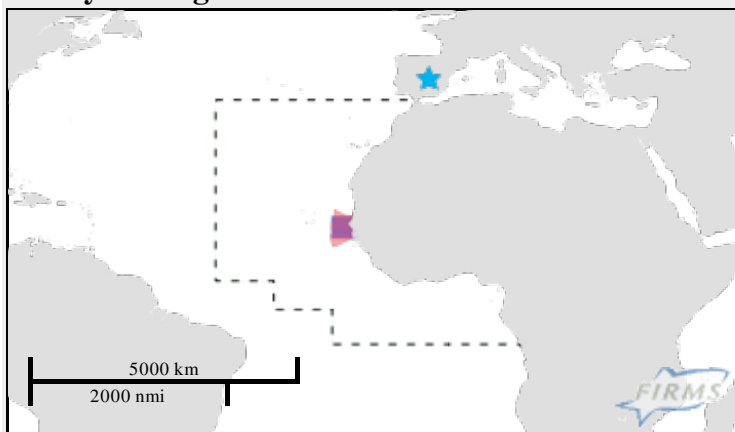
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Fishery life cycle This fishery terminated on 2006.

Overview: *The number of vessels operating in Senegalese waters during the last ten years of the fishery oscillated between 20 in 1999 and only 5 vessels in 2006. These shrimp-trawlers used to share fishing licences in the neighbour countries Mauritania and Guinea Bissau, moving to one or another fishing ground depending on the fish abundances or on the close seasons in Mauritania. The deep water rose shrimp *P. longirostris* was the target species for this fleet, thus constituting more than the 80% of the catches. It was followed by small proportions of the striped red shrimp *A. varidens* and of the West African geryon *C. maritae* (8-9%) and other crustaceans, cephalopods and fishes species. The fleet used to alternate the use of outriggers and the classic bottom otter trawl with trawl doors ("baka" type), depending on the target species. Thus, outriggers was used to fish *P. longirostris* during daylight hauls, while the classic bottom otter trawl with trawl doors was employed for a deeper fishery, especially targeting *A. varidens* and *C. maritae* in hauls made at night. The expiration of the last Fishing Agreement between Senegal and the EU caused the closure of this fishery in 2006.*

Location of Spain Freezer bottom trawl shrimp fishery - Senegalese waters



Main layers

- FAO areas and their sub-divisions
- EEZ

APPROACH: FISHING ACTIVITY

Fishing Activity

Fishing Gear: Bottom otter trawls [more>>](#)

Type of production system: Commercial; Industrial

Fishery Area: Senegal; Atlantic, East ...

Seasonality: November-August ...




Harvested Resource

Target Species: Deep-water rose shrimp

Associated Species: Striped red shrimp; West African geryon; Tonguesole nei ... [more>>](#)

Means of Production

Vessel Type: Stern trawlers freezer

Associated layers	Fishery Indicators Nominal Effort: Number of vessels Participation: Number of fishermen Production: Catch total; Catch <i>P. longirostris</i> ; Catch <i>A. varidens</i>
 Geographic reference	
Intersecting layers	
 Intersecting: FAO major fishing areas	
Base layers	
 200 nautical miles arcs	

Geographic reference: Spain
Spatial Scale: National

Table of Contents

Overview - Fishery History - Fishing Activity - Post Harvest - Management - Source of Information

History

The exploitation of deep-sea resources in waters off Senegal by the Spanish fleet began in the seventies. During these years, part of the Spanish shrimper fleet operating in North Western African waters extended to Senegal, where it started a deep-sea fishery targeting *Parapenaeus longirostris*. The access to this fishing ground was regulated by different Fishery Agreements, first between Senegal and Spain, and since 1986, between Senegal and the EU. These agreements were changing to more restrictive conditions to the Spanish fleet until the final closure of this fishery in June 2006.

Fishing Activity

Type of production system: Commercial; Industrial

Fishery Area

Climatic zone: Temperate; Tropical. **Bottom type:** Soft_bottom. **Depth zone:** Shelf (50 m - 200 m); Slope (200 m - 1000 m). **Horizontal distribution:** Neritic. **Vertical distribution:** Demersal/Benthic.

Geo References for: Senegal

Senegal

Exclusive Economic Zone Areas (EEZ)	SEN - Senegal
FAO Fishing Statistical Subdivisions	34.3.12 - Atlantic, East central / 34.3.12

More Geo References

The following area codes have been found as intersecting the location of Spain Freezer bottom trawl shrimp fishery - Senegalese waters

FAO Major Fishing Areas	34 - Atlantic, Eastern Central
Large Marine Ecosystem Areas (LME)	27 - Canary Current
	28 - Guinea Current

The Senegalese EEZ is dominated by several cyclonic gyres, including the Guinea Dome at 10°N, 20°W, driven by the North Equatorial Counter Current (Tomczak and Godfrey, 1994). Because the cyclonic rotation induces upwelling (doming of the thermocline), these features are more productive than the surrounding waters. The productivity of the Senegalese waters is high during winter, as a result

of river run-off after the rainy season, localized upwelling, and cyclonic eddies retaining productive waters. Around May, the hydrographic conditions off Senegal become less favorable, with SST rising towards ca. 25°C, stratification of surface water, and decreasing food availability (Zeeberg et al., 2008). The upwelling starts on the Senegalese continental shelf inducted by trade winds from November to January. Then, it extends from the North to the South coast, with a maximal intensity in March-April. Along the North coast, the upwelling localizes around Saint Louis, being extremely coastal and with maximal intensity in December-March. This marked seasonality of upwellings and the latitudinal displacement through the Mauritanian and Senegalese coasts produce important changes in the structure of the biological communities. In short periods (weeks), the system can alternate from a warm equatorial phase to a cold subtropical phase, this deriving in an alternated dominance between tropical and temperate communities (Meiners, 2007).

Resources Exploited

Deepwater rose shrimp - Morocco, Mauritania, Senegal and Gambia

Striped red shrimp - Morocco, Mauritania, Senegal and Gambia

West African geryon - Morocco, Mauritania, Senegal and Gambia

Common cuttlefish - Morocco, Mauritania, Senegal and Gambia

Canary Tonguesole - Senegal and Gambia

Octopus - Senegal and Gambia

Other resources: Stocks of scaldfishes.

Target Species

Parapenaeus longirostris

FAO Names : en - Deep-water rose shrimp, fr - Crevette rose du large, es - Gamba de altura, ar - إيربيان
وردية أعماق المياه, zh - 长额拟对虾, ru - Креветка розовая глубоководная

Adults

Associated Species (Bycatch)

Aristeus varidens

FAO Names : en - Striped red shrimp, fr - Gambon rayé, es - Gamba listada

Chaceon maritae

FAO Names : en - West African geryon, fr - Géryon ouest-africain, es - Gerión de Guinea

Cynoglossus spp

FAO Names : en - Tonguesole nei, fr - Sole-langues nca, es - Lenguas nep

Arnoglossus spp

FAO Names : en - Scaldfishes nei

Sepia spp

FAO Names : en - Cuttlefishes nei, fr - Seiches nca, es - Sepias nep

Octopus vulgaris

FAO Names : en - Common octopus, fr - Pieuvre, es - Pulpo común

Related Fisheries - Fishery(ies) switching activity seasonally or targeting the same stock

Spain Freezer bottom trawl shrimp fishery - Mauritanian waters

Spain Freezer bottom trawl shrimp fishery - Guinea Bissau waters

Spain Freezer bottom trawl shrimp fishery - Guinean waters

Vessel Type

Stern trawlers freezer

Flag State

 Spain

Average characteristics of the vessels during the last years of the fishery (period 1999-2006) were 31 m length, 152 GRT and 702 h.p.

Catch Handling and Processing Equipment

Freezing. Catches were classified in commercial categories (from 0 to 8), depending on their size, and frozen on board.

Crew

15-18 persons (Spanish, Mauritanian and Senegalese nationalities) (2009)

Fleet segment

Bottom otter trawl targeting crustaceans with minimum 40 mm mesh size. This fleet was exclusively composed of freezer shrimp trawlers, based at the Port of Huelva (SW Spain).

Fishing Gear

Bottom otter trawls

Bottom shrimp trawls

These shrimp trawlers used to alternate the use of outriggers and the classic bottom otter trawl with trawl doors ("baka" type), depending on the target species. Thus, outriggers were used to fish *P. longirostris* mainly during daylight hauls, while the classic bottom otter trawl with trawl doors was employed for a deeper fishery, especially targeting *A. varidens* and *C. maritae* in deep hauls made at night.

Seasonality

November-August (last fishery Agreement)

Trip Duration

30-90 fishing days

Ports

Huelva (SW Spain)

Fishery Indicators

Type	Measure	Value	Unit	Time period
Nominal Effort	Number of vessels	5	vessels	2006
Participation	Number of fishermen	75-90	persons	2009
Production	Catch total	516	tonnes	2002-2006
	Catch <i>P. longirostris</i>	334	tonnes	2002-2006
	Catch <i>A. varidens</i>	35	tonnes	2002-2006

Post Harvest

Fish Utilisation

Wholesale and exportation

Markets

Huelva (SW Spain)

Management

Management unit: No

Jurisdictional framework

Management Body/Authority(ies): Ministère de l'Economie Maritime des Transports Maritimes de la Pêche et de la Pisciculture

Mandate: Management.

Area under national jurisdiction: Senegal

Maritime Area: Exclusive Economic Zone Areas (EEZ).

Management Body/Authority(ies): European Union

Mandate: Flag state responsibility for its fishing vessels operating in foreign area under national jurisdiction.

Area under national jurisdiction: Senegal

Maritime Area: Exclusive Economic Zone Areas (EEZ).

Management Regime

Last legal definition was the Council Regulation (EC) No 2323/2002 of 16 December 2002 on the conclusion of the Protocol setting out the fishing opportunities and the financial contribution provided for by the Agreement between the European Economic Community and the Government of the Republic of Senegal on fishing off the coast of Senegal for the period from 1 July 2002 to 30 June 2006 (OJ L 349, 24.12.2002, p. 46–65). Management measures of the Spanish crustacean bottom trawl fishery in Senegalese waters were included in the fisheries agreement between the European Community and the Republic of Senegal. After the end of the last agreement (OJ L 349, 24.12.2002, p. 46–65) the Spanish fisheries in Senegalese waters were closed. Management measures described below are those included in this last fishery agreement.

Management Methods

Conservation and management measures with focus on Effort control (licences system) and catch control

- *Aquatic species-related measures*

Limitation of by-catches: 10 % finfish, 10% cephalopods, 2% lobsters. Prohibition of catches of *Cetorhinus maximus* (baskin shark/pèlerin), *Carcharodon carcharias* (great white shark/grand requin blanc), *Carcharias taurus* (sand tiger shark/requin taureau) and *Galeorhinus galeus* (tope shark/requin-hâ).

- *Gear-related measures*
Gear type (doubling of the twine forming the cod-end prohibited) and mesh size (minimum 40 mm)
- *Vessel-related measures*
Access control: Vessel size (3 500 authorized tonnage (GT) per month as annual average for bottom trawlers under the fishing category “Deep sea demersal freezer bottom trawl for crustaceans, with part of landings in Senegal”.)
- *Fishing activity-related measures*
Licences (3, 6 or 12 month’s long licences), vessel number (3 500 authorized tonnage per month as annual average), closed area (out of the fishing area established by the Agreement) and closed season (two months: October-November).

Related Fisheries - Fishing activity(ies) managed under the same management unit or being ruled by the same fishing agreement

Spain Bottom trawl octopus and cuttlefish fishery - Senegalese waters
Spain Bottom trawl black hake fishery - Senegalese waters

More information on fisheries legislation at: FAOLEX legislative database

Source of Information

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